

Residents had a higher peck rate than migrants and resident group size was negatively correlated with that of migrants. The feeding rate of residents also declined in response to increased group size of migrants but not residents. Consistent with their larger size, migrants dominated residents in almost all agonistic encounters. Second, radio-tagged residents shifted their foraging ranges from forest to savanna after migrants had departed. Lastly, the condition of captured residents was below average when sympatric with migrants, whereas they were in above-average condition when migrants were absent. By contrast, in migrants condition improved following their autumn migration. These results suggest that competition-mediated habitat use may occur between other migrant and resident races or congeners and has important conservation implications.

EFFECT OF MATE REMOVAL ON THE VOCAL BEHAVIOR AND MOVEMENT PATTERNS OF EASTERN SCREECH-OWLS

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Male ($N = 6$) and female ($N = 7$) eastern screech-owls (*Otus asio*) typically increased singing rates and movement rates and distances after removal of mates. Such behavior appears to represent an attempt either to reestablish contact with an absent mate or to attract a new mate. In support of the mate attraction hypothesis, five owls apparently acquired new mates after mate removal. Male screech-owls sang more and moved more than females after mate removal, suggesting either that males place a higher priority on reestablishing contact with an absent mate or that males use a more active strategy than females to attract new mates. Both males and females used bounce songs more than whinny songs after mate removal, suggesting that bounce songs are more important in intersexual communication. Extended bounce songs were given more frequently after mates were released and were typically uttered near cavities. Males may use these songs to advertise potential nesting cavities, a resource that may be important in mate choice.

MANAGING ACTIVE NEST SITES AND TERRITORIES OF THE PEREGRINE FALCON IN AN URBAN ENVIRONMENT

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With the releases of captive produced peregrine falcons (*Falco peregrinus*) coming to a halt in most of North America, future management of the species will focus on providing suitable nest sites, and monitoring of active territories. Because a majority of active territories in the Midwest are in urban settings, the unique situation posed to managers must be addressed differently than those in a non-

urban setting. Over the past 7 yr, the Wisconsin Peregrine Society (WPS) has worked with several corporations to install, monitor, and maintain nest boxes on their buildings and associated structures. A year-round system of monitoring urban peregrines and using this to plan seasonal activity with our corporate contacts is necessary to ensure proper consideration for the falcons and businesses alike. Although the falcons' seasonal activities (i.e., nesting and fledging) are somewhat predictable, corporate activities at and around nest sites can be quite erratic (i.e., building maintenance and renovations, changes in management, etc.). Proper planning has allowed the WPS to set up effective communication channels with building managers and key personnel which in turn has enabled us to effectively manage urban nest sites and minimize disturbances and losses during the nesting season.

FORAGING RELATIONSHIPS BETWEEN CORVIDS AND GOLDEN EAGLES: MUTUAL PARASITISM?

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The interaction of golden eagles (*Aquila chrysaetos*), common ravens (*Corvus corax*), and black-billed magpies (*Pica pica*) during foraging was studied during the winters of 1991-92 and 1992-93 in southwestern Idaho. These species appear to have a closely intertwined relationship best described as mutual parasitism. Magpies are typically the first species to discover new foods (carcasses), but ravens quickly cue in on magpies to find food, and eagles cue in on both corvids to locate food. Eagles dominate ravens which dominate magpies in foraging groups. Thus, one-half of the parasitism involves dominant foragers using subordinates to locate rare, ephemeral foods which the dominants then exploit, often to the exclusion of the subordinates. The second half of the parasitism involves corvids cueing in on hunting eagles and foraging upon the scraps remaining from kills. Corvids increased in abundance as soon as eagles killed large prey items (black-tailed jackrabbits [*Lepus californicus*]), but no significant increase was detected after small prey items were killed (ground squirrels). I conclude that the foraging activities of ravens, magpies and eagles are important cues that each species uses to opportunistically locate food items during winter.

PARENTAL INVESTMENT BY EASTERN SCREECH-OWLS: ROLES OF MALES AND FEMALES IN FEEDING NESTLINGS

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Among monogamous species that rear altricial young, male parental effort may be substantial and nearly equal to